DEPARTMENT OF THE AIR FORCE
DETACHMENT 3, USAF SCHOOL OF AEROSPACE MEDICINE (AFMC)
KADENA AIR BASE JAPAN

18 September 2009

MEMORANDUM FOR 3 CES/CEIOUB
5955 Zeamer Avenue
Elmendorf AFB, AK 99506

FROM: Det 3, USAFSAM/CDE
Unit 5213, Box 10
APO AP 96368-5213

SUBJECT: Consultative Letter, AFRL-SA-BR-CL-2009-0076, Pest Management Program Review for Elmendorf Air Force Base, Alaska.

1. Executive Summary: A thorough review of all operational aspects of the Elmendorf AFB Pest Management Program was conducted the week of 10 August 2009 as requested by HQ PACAF/A7AN. The staff assistance visit (SAV) was conducted by the Medical Entomologist from Detachment 3, USAF School of Aerospace Medicine (Det 3, USAFSAM) and the Chief Entomologist from the Air Force Aerial Spray Flight (USAF Reserve Command, Youngstown, OH). This SAV was done concurrently with a mosquito survey project done in conjunction with the Public Health Flight (3 AMDS/SGPM). The purpose of this particular SAV was to address the needs of the Elemendorf AFB Pest Management Shop (3 CES/CEOIUB) and to ensure compliance of all DoD, AF, Federal and State regulations. Overall, the Pest Management Shop is a well-run program in spite of the long-term problematic issues with the current and collocated design of the pest management facility. These problems (i.e., compliance discrepancies) are highlighted in this consultative letter.

2. References:

a. Air Force Instruction 32-1053, *Integrated Pest Management Program*. 23 June 2009.
b. Armed Forces Pest Management Board Technical Guide 17, *Military Handbook: Design of Pest Management Facilities*. August 2009.
c. Department of Defense Instruction 4150.7, *Pest Management Program*. 29 May 2008.
d. 2009 Installation Pest Management Plan for Elmendorf AFB.
e. U.S. Team Guide. *Environmental, Safety, Occupational Health Compliance Assessment and Management Program (ESOHCAMP) Checklist and Protocols. Section 7: Pesticide Management*. June 2009.
f. U.S. Team Guide. *ESOHCAMP Checklist and Protocols. Section 7: Pesticide Management., Section 7: Pesticide* Management; Air Force Supplement. June 2009.
g. U.S. Team Guide. *ESOHCAMP Checklist and Protocols. Section 7: Pesticide Management. Alaska Supplement*. April 2009.

3. Personnel Involved: The following personnel were contacted and interviewed during this SAV.

a.	TSgt Lonnie Kruel	3 CES/CEOIUB
b.	SSgt Robert Lopez	3 CES/CEOIUB
c.	SSgt Jeffrey Lathrom	3 CES/CEOIUB
d.	A1C Irney Parton	3 CES/CEOIUB
e.	Mr. Francis Murtha	3 CES/CEOIUB

4. Findings and Solutions:

a. The current pest management facility on Elmendorf AFB (Bldg 5327) is collocated with other offices with the 3rd Civil Engineer Squadron. DoD guidance states that pest management facilities must be located away from congested areas and shall be at least 100 feet from other structures (PM.45.7.AF, implementing para 3.4.2 of TG 17), and clearly this is not the case at Elmendorf. This discrepancy poses a health risk for those that work in Bldg 5327and could also be interpreted as violation of Alaska state requirement (PM.45.1.AK), which is to ensure that pesticides are not being stored in a manner that might endanger human health, safety or welfare.

b. The ventilation system for pesticide mixing is not designed in accordance with DoD guidelines (PM 45.13.AF, implementing para 3.5.4.2 of TG 17). The system must be roof-mounted with a vertical discharge of airflow. The current set-up, which was originally designed for roof-mounted vertical discharge (see Attachment 1, Figure 1), has now been configured to discharge from the side wall of the mixing room. The airflow then discharges in a downward direction into the recreation courtyard located behind the pest management facility – a less than ideal situation. This discrepancy must be re-configured to meet DoD guidelines and still meet the necessary minimum of six air changes per hour.

c. There is no permanent mechanism to ensure that a spill is contained within the vehicle and application equipment storage area (i.e., the garage) from going outside or to prevent rainwater from coming into the garage. The requirement (from PM.45.9.AF) is to have either a sloped garage or a berm (e.g., a 4-inch curb) IAW TG 17 para 3.1.5.1. This curb can be constructed on the floor immediately upon entering the doors of the garage (see Attachment 1, Figures 2-3).

d. Concrete floors must have a nonabsorbent, nonskid finish IAW TG 17 3.1.5.1 (see Attachment 1, Figures 2-4). This is to prevent pesticides from seeping into the concrete or running down into the cracks that are currently found in the garage area. A proper sealant must be applied in the garage where the pesticide application equipment is stored.

e. There is not adequate fire protection, as directed by the DoD (PM 45.20.AF, implementing para 3.1.4.1.3 of TG 17), that exists between where the vehicles stored in the garage and where the pesticides are stored. By regulation, when vehicles are located under the same roof as the pesticide area, they must be separated from the pesticide area by a minimum of 2-hour fire rated construction. Currently the pesticides are separated only by sheet rock (see Attachment 1, Figures 5-6).

5. Discussion:

a. Overall, the pest management shop is well-run and maintained by three active duty enlisted personnel, one reservist and one full-time civilian. The pest management shop has the right number of people and the right equipment to accomplish the mission. Certification, training, record-keeping are above average with clearly displayed certifications and properly organized references.

b. A solution must be identified to remedy the shortcomings of the current pest management facility. This issue has been previously identified on MAJCOM External ESOHCAMPs since the 1990s and was presented to the 3 WG/CC as a "Top 5 Issue" during the outbrief of the 2006 PACAF External ESOHCAMP. However, this was not identified as a finding in the 2009 Internal ESOHCAMP. A long term plan should be identified prior to allocating funds to remedy the deficiencies within the current building. One potential option could be the relocation of the current facility to the pest management facility that is located a few miles away on Fort Richardson. This option makes sense because the two installations are combining as a result of the Base Realignment and Closure (BRAC) recommendations. Even though the other discrepancies must be addressed (i.e., 4.b. - e. from above), the limiting factor for the Elmendorf AFB Pest Management Facility is the fact that they are collocated with other base activities.

c. Currently, the pest management shop rarely uses organophosphate or carbamate insecticides and, as such, the pest management personnel are not monitored via cholinesterase testing (except prior to an operational deployment). Only one carbamate insecticide is stored in the pest management facility (Flytek®; active ingredient = methomyl) and this product was not used in 2009. However, in order to better evaluate potential exposures in the workplace (both for the pest managers and for the other civil engineer personnel that work in Bldg 5327), a request should be made to the Bioenvironmental Engineering Flight (3 AMDS/SGPB) in order to conduct a review of the hazards in the workplace.

d. It is necessary to maintain all equipment in a fully-mission capable (FMC) status. Although the management of adult mosquitoes is not a routine function at Elmendorf AFB, the Pest Management Shop does have a truck mounted ultra-low volume (ULV) fogger. This ULV fogger was not functional during this SAV but should be repaired to restore it to FMC status. Even while not in use for its intended purpose of controlling mosquitoes, training can still be accomplished with the ULV to ensure that the active duty personnel know how to operate the equipment should the need arise at Elmendorf, at a deployed location or at the service member's next duty station.

6. If you have any questions concerning this consultative letter, please contact Maj Wolf at DSN 634-2639 or via e-mail at Stephen.Wolf@kadena.af.mil. Both of us sincerely appreciated the opportunity to provide assistance on this issue and we would like to extend our gratitude to all of the pest management professionals at Elmendorf AFB for their cooperation and support.

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PACAF Command Medical Entomologist

MARK S. BREIDENBAUGH
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AFRC Command Medical Entomologist

Attachment:
Pictures

cc:
HQ PACAF/A7AV
HQ PACAF/SGPM
3 AMDS/SGPB
3 CES/CEO

Pictures

Fig 1. Elmendorf AFB: Improper ventilation

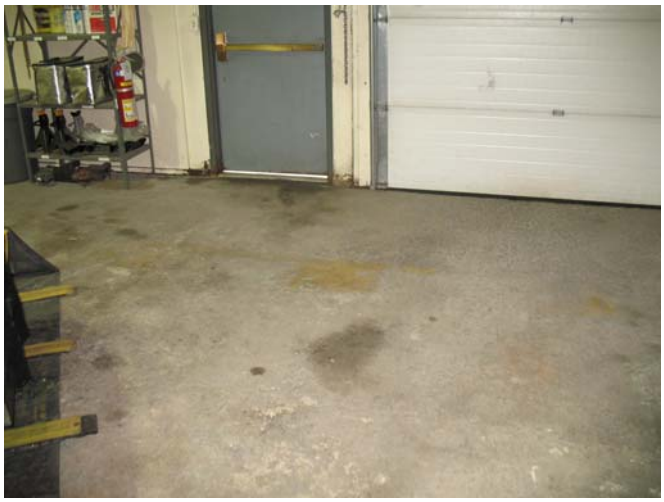


Fig 2. Elmendorf AFB: No berm/improper grading

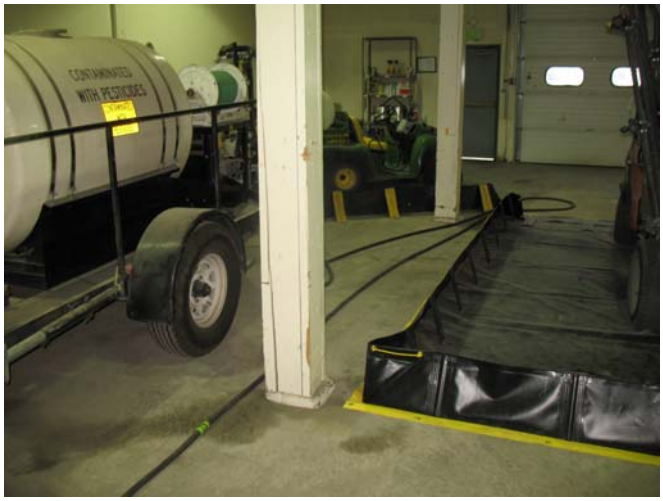
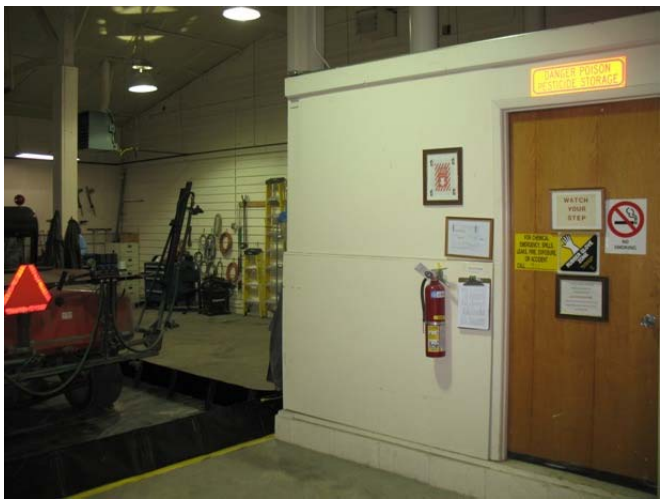


Fig 3. Elmendorf AFB: No berm/improper grading

Fig 4. Elmendorf AFB: Inadequate floor sealant



Figs 5 and 6. Elmendorf AFB: Motorized vehicles next to non-flame resistant pesticide storage area